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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,507	10/24/2003	Franz Kuttner	02981.000005.	7407
5514	7590	04/15/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			JEANGLAUDE, JEAN BRUNER	
			ART UNIT	PAPER NUMBER
			2819	

DATE MAILED: 04/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,507

Applicant(s)

KUTTNER ET AL.

Examiner

Jean B Jeanglaude

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10-24-04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10-24-04 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Specification

Abstract

1. Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

It is suggested not to use the word phrase "according to the invention" in the abstract.

Informalities

2. The disclosure is objected to because of the following informalities: it is suggested to delete "A method and circuit configuration for mixing a digital signal with an analogue signal" in the abstract, lines 1, 2.

Appropriate correction is required.

Drawings

3. The drawings are objected to because the drawings in figures 1, 2, 3 fail to label block 1 as indicated in the specification. It is suggested to insert D/A in block 1 of figures 1, 2, 3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(a) A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 – 3, 7, 10, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (US Patent Number 6,215,430).

6. Regarding claims 1, 7, Smith et al. discloses a circuit and method (figs. 1, 3, 5) for configuration for mixing a digital signal with a second signal (the input of the mixer of figs. 1, 3, 5 with the carrier frequency of the mixer of figs. 1, 3, 5), the circuit configuration comprising a digital to analog converter (22, fig. 1; 66, figs. 3, 5) with a current output (the output of the DAC is a current output) and a mixer (26, figs. 1, 3; 28, fig. 5) with a current input (figs. 1, 3, 5), wherein the digital to analog converter and the mixer are interconnected with one another in such a manner that the current output of the digital to analog converter is connected to the current input of the mixer by means of a current signal (figs. 1, 3, 5).

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7. Regarding claim 2, 3, 10, Smith et al. discloses a circuit configuration and method (figs. 1, 3) that comprise a filter (24, fig. 1; 70, fig. 3) operating within the current domain, inserted between the DAC (22, fig. 1; 66, fig. 3) and the mixer (26, figs. 1) where the filter is a low pass filter (col 1, lines 63 – 66).

8. Regarding claim 11, Smith et al. discloses a circuit configuration (figs. 1, 3, 5) wherein the DAC (22, fig. 1; 66, figs. 3, 5) converts the digital signal into an analog current signal supplies the analog current to a current input of the mixer and the mixer mixes the analog current signal and the second signal (figs. 1, 3, 5).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 8, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US Patent Number 6,215,430).

11. Regarding claims 8, 9, Smith et al. discloses the limitations as discussed above but does not explicitly disclose a circuit configuration wherein the current output of the digital to analog converter is terminated with a diode wherein the diode is a component part of a mixer. However, as noted in Smith the mixer in figs. 1, 3, and 5 is formed of a plurality of electronic components wherein diode is an alternative component that is used in a mixer circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that Smith et al's system is at least fully

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equivalent to the claimed invention and an artisan in the art would have used diode as an electronic component in designing a mixer.

12. Moreover, Smith et al. teach all the limitations as discussed above but does not explicitly disclose a method wherein the second signal is a carrier signal for wireless transmission of the digital signal (claim 4); a method wherein the digital signal has digitally coded speech signals (claim 5); a method wherein the method is used in mobile communication (claim 6). However, it is noted in Smith et al. that Smith et al.'s system is used to process a digital signal for subsequently analog transmission (see title, col 1, lines 6 – 10, 20 - 24). In transmitting the analog signal, Smith et al. is considered to be a system that can be implemented in wireless devices, such as cellular telephones, as indicated in col 1, lines 20 – 24 and since the input signal is a digital signal, one ordinary skill in the art would recognize that Smith et al. is not limited to a specific digital signal and an artisan in the art would have used Smith et al.'s digital input signal as a digital coded speech signals to achieve the same end result as the claimed invention.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bauer (US Patent Number 3,987,280) discloses a digital bandpass converter.

Xin et al. (US Patent Number 6,268,818) discloses a method and apparatus for improving modulation accuracy.

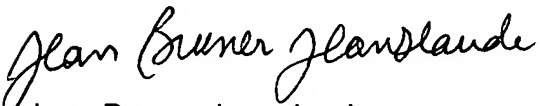
Eriksson et al. (US Patent Number 6,549,153) discloses a digital to analog conversion method and apparatus.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B Jeanglaude whose telephone number is 571-272-1804. The examiner can normally be reached on Monday - Friday 7:30 A. M. - 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jean Bruner Jeanglaude
April 7, 2004

JEAN JEANGLAUE
PRIMARY EXAMINER